

Amendments to the Claims:
Listing of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A ~~diagnostic test~~ method for characterizing a ~~human patient's test~~ subject's risk of developing or having cardiovascular disease, comprising:

a) ~~obtaining the~~ determining levels of myeloperoxidase (MPO) activity, myeloperoxidase (MPO) mass, or both in a bodily sample from the ~~human patient- test subject~~, said bodily sample being blood or a blood derivative; and

~~b) comparing the levels of myeloperoxidase (MPO) activity, myeloperoxidase (MPO) mass, or both, respectively, in the bodily sample from the human patient- subject with one or two predetermined values levels,~~

~~wherein such comparison provides information for characterizing the human patient's elevated levels of MPO activity or MPO mass or both in blood or a blood derivative of the test subject as compared to at least one predetermined value based on levels of MPO activity, MPO mass or both as compared to levels of MPO activity, MPO mass, or both, respectively in comparable bodily samples obtained from a population of control subjects indicates that the test subject is at risk of developing or having cardiovascular disease.~~

2. (currently amended) The ~~diagnostic test~~ method of claim 1 wherein the level of myeloperoxidase activity in the ~~human patient's test subject's~~ bodily sample is ~~obtained~~ determined by flow cytometry.

3. (currently amended) The ~~diagnostic test- method~~ of claim 1, wherein ~~one of said one or two~~ predetermined values is a single normalized value or a range of normalized values and is based on the MPO activity levels in comparable bodily samples from the general population or a select population of ~~human~~ control subjects.

4. (currently amended) The ~~diagnostic test~~ method of claim 1 wherein ~~one of said one or two~~ predetermined values is a single representative value or a range of representative values and is based on the MPO activity levels in comparable bodily samples from the general population or a select population of ~~human~~ control subjects.

5. (currently amended) The ~~diagnostic test~~ method of claim 1, wherein ~~one of said one or two~~ predetermined values is a plurality of predetermined MPO activity level ranges that are based on the MPO activity levels in comparable bodily samples from the general population or a select population of ~~human~~ control subjects, and

~~—said comparing step comprises determining in which of said plurality of predetermined MPO activity level ranges the human patient's MPO activity level falls.~~

6. (currently amended) The ~~diagnostic test~~ method of claim 1, wherein the bodily sample is one or more blood derivatives selected from the group consisting of leukocytes, neutrophils, monocytes, mononuclear lymphocytes, sub-populations of neutrophils, sub-populations of neutrophils, sub-populations of monocytes, and sub-populations of mononuclear lymphocytes.

7. (currently amended) The ~~diagnostic test~~ method of claim 1, wherein the levels of myeloperoxidase mass in the ~~human patient's~~ test subject's bodily sample is obtained by an immunological technique.

8. (currently amended) The ~~diagnostic test~~ method of claim 1, wherein ~~one of said one or two~~ predetermined values is a single normalized value or a range of normalized values and is based upon the MPO mass levels in comparable bodily samples from the general population or a select population of ~~human~~ control subjects.

9. (currently amended) The ~~diagnostic test~~ method of claim 1, wherein ~~one of said one or two~~ predetermined values is a single representative value or a range of representative values and is based upon the MPO mass levels in comparable bodily samples from the general population or a select population of ~~human~~ control subjects.

10. (currently amended) The ~~diagnostic test~~ method of claim 1, wherein ~~one of said one or two~~ predetermined values is a plurality of predetermined MPO mass level ranges which are based on the MPO mass levels in comparable bodily samples from the general population or a select population of human control subjects, ~~and~~

~~—said comparing step comprises determining in which of said plurality of predetermined MPO mass level ranges the human patient's MPO mass level falls.~~

11. (currently amended) A ~~diagnostic test~~ method for characterizing a ~~human patient's test~~ subject's risk of developing or having cardiovascular disease, comprising:

a) ~~—obtaining the determining levels of one or more select myeloperoxidase-generated protein or lipid oxidation products in a bodily sample from the human patient test subject, wherein said bodily sample is urine, blood or a blood derivative, wherein each of select myeloperoxidase-generated oxidation products is selected from the group consisting of nitrotyrosine, dityrosine, methionine sulphoxide, and an MPO-generated lipid peroxidation product;—and~~

b) ~~—comparing the levels of each of said select myeloperoxidase-generated oxidation product in the bodily sample from the human patient with a predetermined value;~~

~~wherein said comparison provides information for characterizing the human patient's elevated levels of said one or more MPO-generated protein or lipid oxidation products in the bodily sample from the test subject as compared to a predetermined value based on levels of said one or more MPO-generated protein or lipid oxidation product in comparable bodily samples obtained from a population of control subjects indicates that the test subject is at risk of developing or having cardiovascular disease.~~

12. (currently amended) The ~~diagnostic test~~ method of claim 11, wherein at least one of said ~~select~~ one or more myeloperoxidase-generated oxidation products is selected from

nitrotyrosine, dityrosine, methionine sulfoxide, protein-bound nitrotyrosine, protein-bound dityrosine, or an MPO-generated lipid peroxidation product.

13. (currently amended) The ~~diagnostic test~~ method of claim 11, wherein at least one of said one or more ~~select~~ myeloperoxidase generated oxidation products is an MPO lipid peroxidation product selected from the group consisting of hydroxy-eicosatetraenoic acids (HETEs); hydroxy-octadecadienoic acids (HODEs), F2Isoprostanes; the glutaric and nonanedioic monoesters of 2-lysoPC (G-PC and ND-PC, respectively); the 9-hydroxy-10-dodecenedioic acid and 5-hydroxy-8-oxo-6-octenedioic acid esters of 2-lysoPC (HDdiA-PC and HOdiA-PC, respectively); the 9-hydroxy-12-oxo-10-dodecenoic acid and 5-hydroxy-8-oxo-6-octenoic acid esters of 2-lysoPC (HODA-PC and HOOA-PC, respectively); the 9-keto-12-oxo-10-dodecenoic acid and 5-keto-8-oxo-6-octenoic acid esters of 2-lysoPC (KODA-PC and KOOA-PC, respectively); the 9-keto-10-dodecendioic acid and 5-keto-6-octendioic acid esters of 2-lysoPC (KDdiA-PC and KOdiA-PC, respectively); the 5-oxovaleric acid and 9-oxononanoic acid esters of 2-lysoPC (OV-PC and ON-PC, respectively); 5-cholesten-5, 6-epoxy-3-ol (cholesterol -epoxide); 5-cholesten-5, 6-epoxy-3-ol (cholesterol -epoxide); 5-cholesten-3,7-diol (7-OH-cholesterol); 5-cholesten-3, 25-diol (25-OH cholesterol); 5-cholesten-3-ol-7-hydroperoxide (7-OOH cholesterol), an oxime derivative of phospholipid; and cholestan-3, 5, 6-triol (triol).

14. (currently amended) The ~~diagnostic test~~ method of claim 11, wherein the predetermined value is single representative value or a range of representative values and is based upon the levels of said ~~select~~ one or more myeloperoxidase oxidation products in comparable bodily samples from the general population or a select population of ~~human~~ control subjects.

15. (currently amended) The ~~diagnostic test~~ method of claim 11, wherein the predetermined value is a plurality of predetermined MPO activity level ranges which are based on the based upon the levels of said ~~select~~ one or more myeloperoxidase oxidation products in comparable bodily samples from the general population or a select population of ~~human-control~~ subjects; and

~~—said comparing step comprises determining in which of said plurality of predetermined select myeloperoxidase-generated oxidation product ranges the human patient's select myeloperoxidase-generated oxidation product level falls.~~

16. (currently amended) A ~~diagnostic test method~~, for characterizing a human patient's risk of developing or having cardiovascular disease, comprising:

a) ~~obtaining the determining~~ levels of myeloperoxidase activity or myeloperoxidase mass or both in a bodily sample from the human patient, said bodily sample being blood or a blood derivative;

b) ~~obtaining the determining~~ levels of ~~a select one or more~~ myeloperoxidase-generated protein or lipid oxidation products in a bodily sample from the human patient, wherein said bodily sample is blood, a blood derivative, or urine, ~~wherein said select myeloperoxidase-generated oxidation product is selected from the group consisting of free nitrotyrosine, peptide bound nitrotyrosine, free dityrosine, peptide bound dityrosine, free methionine sulfoxide, peptide bound methionine sulfoxide and an MPO-generated lipid peroxidation product, said bodily sample being blood, a blood derivative, or urine;~~

c) comparing the levels of myeloperoxidase activity, myeloperoxidase mass, or both, respectively in the bodily sample from the human patient with one or more predetermined values based on levels of myeloperoxidase activity, myeloperoxidase mass, or both, respectively in comparable bodily samples of a population of control subjects; and

d) comparing the level of said ~~select one or more~~ myeloperoxidase-generated oxidation products in the bodily sample with ~~an one or more additional~~ predetermined values based on levels of said one or more myeloperoxidase generated or lipid oxidation products in comparable bodily samples from a population of control subjects,

wherein the comparisons of step c and step d provide information for characterizing the human patient's risk of developing or having cardiovascular disease.

17. (withdrawn) A diagnostic test for evaluating a therapeutic agent for cardiovascular disease in a subject suspected of having or having cardiovascular disease, comprising.

comparing the levels of MPO activity or MPO mass in a bodily sample taken from the subject after treatment with said therapeutic agent with the levels of MPO activity or MPO mass, respectively, in a corresponding bodily sample taken from the subject prior to treatment with said therapeutic agent, wherein said bodily sample is blood or a blood derivative.

18. (withdrawn) The diagnostic test of claim 17, further comprising the step of comparing the levels of a second risk predictor in a blood sample taken from the subject after treatment with said therapeutic agent with levels of said second risk factor in a blood sample taken from the subject after treatment, wherein the second risk predictor is selected from the group consisting of LDL, C-reactive protein, total cholesterol, HDL cholesterol, triglycerides, LDL/HDL ratio, Lp(a), Interleukin 6, and homocysteine.

19. (withdrawn) A diagnostic test for evaluating a therapeutic agent for cardiovascular disease in a subject suspected of having or having cardiovascular disease., comprising.

comparing the levels of one or more select MPO-generated oxidation products in a bodily sample taken from the subject after treatment with said therapeutic agent with the levels of MPO activity or MPO mass in a corresponding bodily sample taken from the subject prior to treatment with said therapeutic agent, wherein said bodily sample is blood, a blood derivative, or urine, and wherein said select MPO-generated oxidation product is free dityrosine, peptide-bound dityrosine, free nitrotyrosine, or peptide-bound nitrotyrosine, free methionine sulfoxide, peptide-bound methionine sulfoxide, or an MPO-generated lipid peroxidation product.

20. (withdrawn) The diagnostic test of claim 17, further comprising the step of comparing the levels of a second risk predictor in the blood sample taken from the subject after treatment with said therapeutic agent with levels of said second risk factor in a corresponding bodily sample taken from the subject after treatment, wherein the second risk predictor is selected from the group consisting of LDL, C-reactive protein, total cholesterol, HDL cholesterol, triglycerides, LDL/HDL ratio, Lp(a), Interleukin 6, and homocysteine.

21. (withdrawn) The diagnostic test of claim 19, wherein said lipid peroxidation product is selected from the group consisting of selected from the group consisting HETEs, HODEs, F2Isoprostanes, G-PC, ND-PC, HDdiA-PC, HODiA-PC, HODA-PC, HOOA-PC, KODA-PC, KOOA-PC, KDdiA-PC, KODiA-PC, OV-PC, ON-PC, cholesterol -epoxide, cholesterol -epoxide, 7-OH-cholesterol, 25-OH cholesterol, 7-OOH cholesterol, and triol.
22. (withdrawn) A kit comprising a package comprising an assay for MPO activity, MPO mass, or a select MPO-generated oxidation product, and a chart comprising a predetermined value for correlating the level of MPO activity, MPO mass, or select MPO-generated oxidation product in a bodily sample from the subject with cardiovascular disease.
23. (New) A method of assessing a test subject's risk of developing or having cardiovascular disease, comprising
- comparing levels of one or markers in a blood or a blood derivative from the test subject with levels of said one or more markers in a blood or a blood derivative from a population of control subjects;
- wherein said markers include myeloperoxidase, an MPO-generated protein oxidation product, and an MPO-generated lipid peroxidation product and
- wherein the difference between the levels of the one or more markers in blood or a blood derivative from the test subject and the levels of said one or more markers in blood or a blood derivative samples from the population of control subjects is indicative of the extent of the test subject's risk of developing or having cardiovascular disease.
24. (New) The method of claim 23, wherein the MPO generated protein oxidation product comprises nitrotyrosine, dityrosine, methionine sulfoxide, or a combination of said oxidized amino acids.
25. (New) The method of claim 7, wherein the test subject is an apparently healthy subject.
26. (New) A method of assessing a test subject's risk of experiencing an acute adverse

cardiovascular event, comprising:

determining levels of myeloperoxidase (MPO) activity, myeloperoxidase (MPO) mass, or both in blood or a blood derivative from the test subject;

wherein elevated levels of MPO activity or MPO mass or both in blood or a blood derivative of the test subject as compared to levels of MPO activity, MPO mass, or both, respectively in blood or blood derivative samples obtained from control subjects indicates that the test subject is at risk of experiencing an acute adverse cardiovascular event.

27. (New) A method of determining a test subject's risk of requiring medical intervention, comprising:

determining levels of a risk predictor in a bodily sample from the test subject, wherein said risk predictor is myeloperoxidase activity, myeloperoxidase mass, a myeloperoxidase-generated oxidation product, or any combination thereof, and wherein said bodily sample is blood or a blood derivative;

comparing levels of said risk predictor in the bodily sample of the test subject to levels of said risk predictor in comparable samples obtained from a control population,

wherein a patient whose levels of said risk predictor is characterized as being elevated in comparison to levels of said risk predictor in a comparable bodily sample obtained from individuals in a control population is at risk of requiring medical intervention.